First Herb-Based Cancer Cure

Dental Tribune International
By Robin Goodman

A team of researchers from the Indian Institute of Chemical Biology (IICB) in Calcutta has made a serendipitous discovery of a molecule that could become the first herb-based cure for Chronic Myelogenous Leukemia (CML), which is a severe type of blood cancer. The molecule, called chlorogenic acid, appears to target and kill leukemia cells.

During in vivo-modulatory studies on betel leaf and its effect on human cell lines, the team found that chlorogenic acid induced programmed cell death in human cancer cells transplanted in experimental nude mice, explained team leader and immunologist Santu Bandyopadhaya. The molecule, which is extracted from the leaves of Piperaceae (Piper Betel), showed no deleterious effects on the growth of non-cancerous cells.

Currently there is only one drug available around the world for the treatment of CML, but its high cost prohibits widespread use. A new drug made from chlorogenic acid would prove to be a much cheaper option due to the wide availability of betel leaf.

The team has subsequently applied for global and US patents on the molecule, which was referred to as ICb-101 during their studies. Results of their work will be published in the October edition of the journal, Blood. In the interim, Dr. N.K. Ganguly, Director General of the Indian Council of Medical Research (ICMR) has given verbal permission so that multi-centre human trials can begin immediately. Funding for the project was provided by the Council for Scientific and Industrial Research (CSIR).